IMAGINING the possibilities. MAKING THEM HAPPEN.

Indiana Department of Education

Process Standards for Mathematics

Indiana's Academic Standards

First Grade:
Creating a Context for Addition

Agenda

1. Become familiar with the Process Standards for Mathematics.

2. Work the task.

3. View the video.

4. Debrief the video.

Become familiar with the Process Standards for Mathematics (PS).

- Read the brief descriptions of the 8 Process Standards for Mathematics (PS).
- Underline key words for each PS.
- In small groups, share your thoughts or questions about each PS. Be prepared to share your understanding of the PS with the rest of the participants.

Work the task

Write a word problem for each of these equations:

$8 + \square = 16$

$\square + 9 = 12$

IAS-M Connection

1.CA.2 Solve real-world problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).

1.CA.4 Solve real-world problems that call for addition of three whole numbers whose sum is within 20 (e.g., by using objects, drawing, and equations with a symbol for the unknown number to represent the problem).

Expectations for Viewing the Video

- Assume there are many things you do not know about the classroom and the students.
- Assume good intent and expertise on part of the teacher.
- Keep focused on how the students are engaging in the task.

Adapted from *Classroom Discussions: Using Math Talk to Help Students Learn*, 2009, 2nd edition, p.156

View the Video

During the video, when you see the light bulb appear, it is an indication you should pay special attention to the students' and teacher's actions.

Record what you see happening on the Video Analysis Matrix.

Debrief the Video

- For each row on your Video Analysis Recording Sheet, discuss what you noticed while you watched the video in your small group.

- Then determine which PS you believe was best exhibited in the classroom during this time period.

Additional Questions

1. **The teacher asks the students to "prove" it. What does she mean by this?**
2. At the beginning of the video, the teacher says she is going to "model" a couple of problems for the students and then they will work on their own. Does this use of the word "model" align with the meaning of the word "model" in the PS?
3. **How does the task chosen by the teacher foster the PS?**
4. How does the teacher facilitate (prompt) the PS in this video?
5. **What type of classroom environment supports the PS?**